

## Abstract

### AGGREGATION DEVICES PROCESSING KEEP-ALIVE MESSAGES OF POINT-TO-POINT SESSIONS

Several keep-alive messages of point to point (PPP) sessions received from a remote

5 system are aggregated into a single packet in an aggregation device (e.g., network access  
server). The aggregated packet is sent to a peer aggregation device (e.g., home gateway) at  
the other end of the PPP session. The peer aggregation device may send the status of the  
sessions in a single packet. As a result, the data traffic on a communication backbone due  
to keep-alive status checks may be reduced. Without waiting for the peer aggregation device  
10 to provide the status information, a proxy reply may be generated from the aggregation  
device.

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